

Chapter 8.55

Group B Public Water Systems

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8.55.010 Purpose, objectives, and authority

- (1) The purpose of this chapter is to protect the public health by establishing minimum design, construction, and other standards for Group B public water systems and specified water supplies. These rules are designed to ensure the provision of high quality drinking water in a reliable manner, and in a quantity suitable for intended use.
- (2) The state board of health is authorized under RCW 43.20.050 to establish minimum requirements for the department of health and local boards of health.
- (3) This chapter is intended to coordinate with other applicable statutes and rules for the design construction and monitoring of Group B public water systems and specified water supplies under Chapter 70.116 RCW, Chapter 70.119A RCW, Chapter 246-290 WAC, and Chapter 246-291 WAC.

8.55.020 Application and scope

- (1) These rules apply to all areas of Lewis County, Washington where Group B public water systems are used to provide drinking water to fewer than fifteen service connections and:
 - (a) Fewer than twenty-five people per day; or
 - (b) Twenty-five or more people per day for fewer than sixty days per year, provided the system does not serve one thousand or more people for two or more consecutive days.
- (2) These rules do not apply to a Group B water system that:
 - (a) Consists only of distribution or storage facilities and does not have any source or treatment facilities;
 - (b) Obtains all water from, but is not owned by, a public water system where the rules of this chapter or Chapter 246-290 WAC apply; and
 - (c) Does not sell water directly to any person.
- (3) These rules do not apply to a Group B water system that provides water to one or two service connections, except:
 - (a) When the department determines that it is necessary to protect public health and safety, such as if the system serves a connection with a use listed under LCC 8.55.040(81) (a) through (h).
 - (b) As identified in Table 1, *One and Two Connection Water Supplies*:

TABLE 1
One and Two Connection Water Supplies

Type of Water Supply One to two connections (Not a single family residence or "Same Farm Exemption")	Drilled well inspection	Volume Test	Coliform bacteria test	Initial Complete Inorganic Chemical (IOC) Testing	Sanitary Control Area Covenant	Water User Agreement
A facility, utilizing a drilled well serving two or less connections that include a dwelling and/or business with employees that are family members and no public access.	No	No, If no well log then must conduct one hour pump test and meet 4 gpm flows or adequate storage	Yes Prior to occupancy and within a year. Point of use treatment allowed for Primary MCL exceedence with Notice to Property Title.	No Nitrate test within the year. Arsenic in identified areas. Additional testing as identified. Point of use treatment allowed for primary MCL exceedence with Notice to Property Title.	No	No
A facility with employees and/or public access with two or less connections and less than 25 people per day.	Yes	No If well log indicates flows of >20 gpm otherwise 4-hour pump test is required with minimum flow of 4 gpm or adequate storage	Yes Prior to occupancy and within a year. If positive for bacteria must meet Group B requirements	Yes If primary MCL exceedence must meet Group B requirements.	Yes	No
Two-Party well A water supply that serves two dwelling units on separate properties	Yes	No If well log shows flows of greater than 20 gpm otherwise 4-hour pump test is required with minimum flow of 4 gpm or adequate storage.	Yes Prior to occupancy and within a year. If positive for bacteria must meet Group B requirements.	Yes If primary MCL exceedence must meet Group B requirements. Secondary MCLs are not required to be treated.	Yes	Yes Primary and secondary MCL exceedences or treatment must be included
Shared Well A water supply that serves two dwelling units on the same property, not ADU.	Yes	No If well log shows flows of greater than 20 gpm otherwise 4-hour pump test is required with minimum flow of 4 gpm or adequate storage.	Yes Prior to occupancy and within a year. If primary MCL exceedence must meet Group B requirements, point of use treatment is allowed..	No Nitrate within the year. Arsenic in identified areas. Additional testing as identified. If primary MCL exceedence must meet Group B requirements, point of use treatment is allowed.	No Unless SCA is not contained within lot.	No Unless primary MCLs exceedence treatment and notice on Property Title required
Two connection supply A drilled well that serves two dwelling units one of which is an ADU or Temporary ADU.	Yes	No If well log shows flows of greater than 20 gpm otherwise 4-hour pump test is required with minimum flow of 4 gpm or adequate storage.	Yes Prior to occupancy and within a year. Point of use treatment allowed for primary MCL exceedence with Notice to Property Title.	No Nitrate test within the year. Arsenic in identified areas. Additional testing as identified. Point of use treatment allowed for primary MCL exceedence with Notice to Property Title.	No Unless SCA is not contained within lot.	No

(4) A proposed Group B water system shall meet planning, engineering, and design requirements under WAC 246-290-100 through 246-290-250 if:

(a) The design submitted under LCC 8.55.100 proposes to supply water to another public water system and the combined number of service connections or total population served meets the definition of a Group A public water system; or

(b) The design submitted proposes to serve ten to fourteen residential service connections using average household population standards as required under Chapter 246-291-200(2) WAC and LCC 8.55.150.

(5) A proposed Group B water system which meets criteria established in LCC 8.55.020(4)(a) or (b) shall be reviewed by the Washington State Department of Health (DOH).

(a) After approval of the Group B water system DOH shall provide the department:

(i) Copies of project documents referenced in Design report approval, Chapter 246-291-120 WAC;

(ii) Copies of project documents referenced in Groundwater source approval
Chapter 246-291-125 WAC;

(iii) Copies of project documents referenced in Water system planning and disclosure requirements,
Chapter 246-291-140 WAC;

(iv) Copies of project documents referenced in Water quality requirements for groundwater source
approval, Chapter 246-291-170 WAC;

(v) Copies of project documents referenced in Distribution systems, Chapter 246-291-210 WAC;

(vi) A copy of the Construction Completion Report for Public Water System Projects, Chapter 246-
291-120(5) WAC; and

(vii) A copy of the completed Water Facilities Inventory form (WFI).

8.55.030 General administration

(1) The Health Officer and the department shall administer this chapter under the authority and requirements of Chapter 70.05, and 43.20 RCW.

(2) Chapter 70.05.060(7) RCW authorizes health officers to charge fees for the administration of this chapter.

(3) Chapter 70.119A.30 RCW authorizes the Board of Health to adopt rules that require a purveyor of a Group B water system to obtain an annual operating permit.

(4) The department may enter into an agreement with the Washington State Department of Health (DOH) for administration of specific aspects of Chapter 246-291-030 WAC.

8.55.040 Definitions, abbreviations, and acronyms

The definitions, abbreviations, and acronyms in this section apply throughout this chapter unless the context clearly indicates otherwise.

Acronyms used in this chapter:

(1) "ADD (average day demand)" means the total volume of water produced from all sources of supply over a calendar year divided by three hundred sixty-five.

(2) "ADU (accessory dwelling unit)" means a habitable dwelling unit added and accessory to the primary dwelling unit as a separate structure.

(3) "APWA" means American Public Works Association.

(4) "ASTM" means American Society for Testing and Materials.

(5) "AWWA" means American Water Works Association.

(6) "CSE" means Comprehensive System Evaluation.

(7) "DOH" means the Washington State Department of Health.

(8) "gpm" means gallons per minute.

(9) "kPa" means kilopascal (Standard International units of pressure).

(10) "LCC" means Lewis County Code.

(11) "MCL (maximum contaminant level)" means the maximum permissible level of a contaminant in water the purveyor delivers to any consumer, measured at the source and after any treatment but before entry to the distribution system.

(12) "JPR (Joint Plan of Responsibility)" means a written agreement between the department and DOH.

(13) "MDD (maximum day demand)" means the highest actual or estimated quantity of water that is, or is expected to be, used over a twenty-four hour period, excluding unusual events or emergencies.

(14) "mg/l" means milligrams per liter (1mg/l = 1 part per million).

(15) "ml" means milliliter.

(16) "mm" means millimeter.

- (17) "PAO" means the Lewis County Prosecuting Attorney's Office.
- (18) "PAS" means pitless adaptor standard.
- (19) "PHD (peak hourly demand)" means the maximum rate of water use, excluding fire flow that can occur within a defined service area over a continuous sixty minute time period. PHD is typically expressed in gallons per minute (gpm).
- (20) "psi" means pounds per square inch.
- (21) "SAL" means State Advisory Level.
- (22) "SMA (satellite system management agency)" means a person or entity approved by the DOH in accordance with chapter 246-295 WAC to own or operate public water systems on a regional or county-wide basis without the necessity for a physical connection between the systems.
- (23) "UTC" means Washington Utilities and Transportation Commission.
- (24) "WFI" means a Water Facilities Inventory a form summarizing each public water system's characteristics.
- (25) "WSBOH" means the Washington State Board of Health.
- (26) "WSDOT" means Washington State Department of Transportation
- (27) "µg/l" means micrograms per liter (1 µl = 1 part per billion)

Definitions used in this chapter

- (28) "Acute" means posing an immediate risk to human health.
- (29) "Board" means the Lewis County Board of Health
- (30) "Certified Lab" means an analytical laboratory meeting requirements under Chapters 246-390 and 173-50 WAC for one or more drinking water analytical parameters.
- (31) "Coliform bacteria" means a group of rod-shaped bacteria found in the gastrointestinal tract of vertebrate animals. The presence of coliform bacteria in water is an indicator of possible fecal contamination.
- (32) "Comprehensive system evaluation (CSE)" means a review, inspection and assessment of a public water system, including, but not limited to: Source; facilities; equipment; operation and administration; maintenance; records; planning documents and schedules; and monitoring, for the purpose of ensuring that safe and adequate drinking water is provided.
- (33) "Contaminant" means a substance present in drinking water which may adversely affect the health of the consumer or the aesthetic qualities of the water.
- (34) "Critical water supply service area" means a geographical area characterized by a proliferation of small, inadequate water systems, or by water supply problems that threaten the present or future water quality or reliability of service in a manner that efficient and orderly development may best be achieved through coordinated planning by the water utilities in the area.
- (35) "Cross-connection" means any actual or potential physical connection between a public water system or a consumer's water system and any source of nonpotable liquid, solid, or gas that could contaminate the potable water supply by backflow.
- (36) "Cross-connection control plan" means a document that identifies the procedures the purveyor uses to protect the water system from contamination from cross-connections.
- (37) "Declaration of Covenant" means the document filed on the property title describing the location of the source the protective area around it, and the contaminants that may not be introduced into that area.
- (38) "Department" means Lewis County Public Health and Social Services.
- (39) "Disinfection" means the use of chlorine or other agent or process the department approves for killing or inactivating microbiological organisms, including pathogenic and indicator organisms.
- (40) "Distribution system" means all piping components of a Group B system that serve to convey water from transmission mains linked to source, storage, and treatment facilities to the consumer excluding individual services.
- (41) "Drilled well" means a well where the well hole is excavated by mechanical means such as rotary, cable tool, or auger drilling equipment.
- (42) "Dwelling unit" means a structure, or unit within a structure, with independent living facilities for one or more persons that includes permanent provisions for living, sleeping, eating, cooking, and sanitation. A dwelling unit includes, but is not limited to:
- (a) A single-family residence; or
 - (b) Each unit of an apartment building or multifamily building.
- (43) "Ecology" means the Washington State Department of Ecology.
- (44) "Equalizing storage" means the volume of storage needed to supplement supply to consumers when the peak hourly demand exceeds the total source pumping capacity.

- (45) "Essential services" means facilities that provide a service that is essential to the preservation of the public health and safety such as police, fire, and emergency facilities.
- (46) "Expanding Group B water system" means a Group B water system installing additions, extensions, changes, or alterations to its existing source, transmission, storage, type of services, or distribution facilities that will enable the system to increase the size of its existing service area or the number of approved service connections.
- (47) "Fire flow" means the maximum rate and duration of water flow needed to suppress a fire under WAC 246-293-640 or as required under local fire protection authority standards.
- (48) "Fire suppression storage" means the volume of stored water available during fire suppression activities maintaining a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system and under the condition where the designed volume of fire suppression and equalizing storage has been depleted.
- (49) "Generator transfer switch" means an electrical device that physically prevents electrical current from flowing back into the main service line.
- (50) "Group A public water system" is defined and referenced under WAC 246-290-020.
- (51) "Group B public water system" or "Group B system" means a public water system that is not a Group A public water system, and is defined and referenced under LCC 8.55.020 Application and Scope as a Group B system to which these rules apply.
- (52) "Guideline" means a department or DOH document assisting a purveyor in meeting a regulatory or statutory requirement.
- (53) "Groundwater under the direct influence of surface water (GWI)" means any water beneath the surface of the ground that is determined to have the following characteristics:
- (a) Presence of insects or other macroorganisms, algae, or larger-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*; or
 - (b) Significant and relatively rapid shifts in water conditions such as turbidity, temperature, conductivity, or pH closely correlating to weather or surface water conditions, where natural conditions cannot prevent the introduction of surface water pathogens into the source at the systems' point of withdrawal.
- (54) "Health officer" means the health officer of the local health jurisdiction, an authorized representative, or a designee.
- (55) "Human consumption" means the use of water for drinking, bathing, showering, handwashing, cooking, food preparation, dishwashing, ice-making, or oral hygiene.
- (56) "Hydraulic analysis" means the study of the Group B water system's distribution main and storage network to determine the system's present or future adequacy for providing service to consumers within the established design parameters for the system under peak flow conditions, including fire flow. The analysis establishes the adequacy of design for distribution system components such as piping, elevated storage, booster stations or similar facilities used to pump and convey water to consumers.
- (57) "Infiltration gallery" means a water collection system built of perforated pipe or conduit and placed in permeable earth, for collecting shallow groundwater. An infiltration gallery is usually located close to springs, wetlands, streams, or ponds.
- (58) "Inorganic Chemicals (IOC)" means the chemical and physical parameters identified in Table 3, 4, and 5 required for source approval.
- (59) "Intertie" means an interconnection between public water systems permitting the exchange or delivery of water between those systems.
- (60) "Joint Plan of Responsibility (JPR)" means a written agreement between the department and DOH that:
- (a) Lists the roles and responsibilities of the department and DOH;
 - (b) Provides for a level of supervision necessary to effectively achieve the responsibilities in the JPR;
 - (c) Is signed by an authorized representative from the department and DOH; and
 - (d) Is reviewed at least once every five years and updated as needed.
- (61) "Local board of health" means the governing body of a county health department under Chapter 70.05 RCW.
- (62) "Local health jurisdiction" means a county health department under chapter 70.05 RCW, city-county health department under chapter 70.08 RCW, or health district under chapter 70.46 RCW.
- (63) "Local permitting authority" means the local building official, health officer, or authorized representative that makes determinations regarding building permits and development proposals.
- (64) "Nonresidential service connection" means a connection to a public water system that provides potable water including, but not limited to a:
- (a) Commercial property;
 - (b) Industrial property;
 - (c) Civic property;
 - (d) Municipal property;
 - (e) Institutional property;
 - (f) School;

- (g) Recreational use as defined in this section; or
 - (h) Any other authorized use that provides potable water to a nonresidential population.
- (65) "Non-acute" means posing a possible or less than immediate risk to human health.
- (66) "Potable" means water safe for human consumption.
- (67) "Potential GWI" means a source identified by the department or DOH as possibly under the direct influence of surface water including, but not limited to a:
- (a) Well that has a screened interval fifty feet or less from the ground surface at the wellhead and is located within two hundred feet of a surface water body;
 - (b) Ranney well;
 - (c) Infiltration gallery; or
 - (d) Spring.
- (68) "Primary MCL" means a standard based on chronic, non-acute, or acute human health effects.
- (69) "Public water system" means any system providing water for human consumption through pipes or other constructed conveyances, excluding a system serving only one single-family residence and a system with four or fewer service connections all of which serve residences on the Same Farm. The term includes:
- (a) Collection, treatment, storage, or distribution facilities under the control of a purveyor and used primarily in connection with the system; and
 - (b) Collection, or pretreatment storage facilities not under the control of a purveyor, and primarily used in connection with the system.
- (70) "Purveyor" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system, or applying to create a public water system. Purveyor also means the authorized agents of these entities.
- (71) "Ranney well" means a water well or collection system including a central chamber with horizontal perforated pipes extending out into an aquifer. The perforated pipes may extend out under a surface water body such as a lake or river.
- (72) "Recreational service connection" means a connection to a public water system that provides potable water for temporary usage, less than 60 consecutive days per user, and serves a:
- (a) Campsite; or
 - (b) Recreational vehicle site.
- (73) "Residential service connection" means a connection to a public water system that provides potable water to a dwelling unit.
- (74) "Restrictive Covenant" means the document filed on the property title(s) describing the protective area of the source located on adjacent property(s) and the contaminants that may not be introduced into that area.
- (75) "Same farm" means a parcel of land or series of parcels connected by covenants and devoted to the production of livestock or agricultural commodities for commercial purposes.
- (76) "Sanitary survey" means a review, inspection, and assessment of a public water system by the department or DOH.
- (77) "Sanitary Control Area (SCA)" is defined under LCC 8.55.110(4) and describes an area around a source in which activities are restricted in order to protect source from contamination.
- (78) "Shared well" means a well that serves two single family residences on the same property, in most cases under the same Tax Parcel Number and is not an ADU.
- (79) "Secondary MCL (SMCL)" means a standard based on aesthetic effects such as taste and odor (non-health based).
- (80) "Service connection" means a residential, nonresidential, ADU, or recreational service connection as defined in this section.
- (81) "Single family residence" means a structure in which one or more persons maintain a common household. A single family residence or structure which is used for an activity requiring a permit or license under one or more of the following rules is a Group B water supply and must meet the requirements of LCC 8.55.020(1):
- (a) Food service, Chapter 246-215 WAC;
 - (b) Food inspection, Chapter 16-165 WAC;
 - (c) Residential treatment facility, Chapter 246-337 WAC;
 - (d) Transient accommodations, Chapter 246-360 WAC;
 - (e) Boarding homes licensing rules, Chapter 388-78A WAC;
 - (f) Minimum licensing requirements for child care centers, Chapter 170-295 WAC;
 - (g) School-age child care center minimum licensing requirements, Chapter 170-151 WAC; or
 - (h) Adult family home minimum licensing requirements, Chapter 388-76 WAC.
- (82) "Spring" means a source of water where the aquifer comes in contact with the land surface.
- (83) "Substantial contact" means the elevated degree that a material in contact with water may release leachable contaminants into the water such that levels of these contaminants may be unacceptable with respect to either public health or aesthetic concerns.

(84) "Surface water" means a body of water open to the atmosphere and subject to surface runoff, including captured rainfall.

(85) "Temporary Second Dwelling or Temporary ADU" means a temporary second dwelling of no more than 1,248 square feet in area, in the form of a manufactured home, a fully serviced travel trailer or motor home, to provide:

- (a) A temporary dwelling space for family members who, due to professionally documented physical or mental disorders or disabilities, or risks of such disorders or disabilities, require daily supervision and care where such care is provided by members of the family who reside on the property; or
- (b) A temporary dwelling space for a person providing care for the resident owner of the subject property when said owner needs daily supervision and care as described in (a) above.
- (c) Temporary usage in this section is defined as one year unless a written renewal is approved by the department.

(86) "Two-Party Well" means a well that serves two permanent single family residences (dwellings) on separate properties (separate Tax Parcels), which require easements for purposes of water distribution.

(87) "Trigger Level" means a department drinking water response level. Water supplies with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently at the discretion of the department.

(88) "Water right" means a permit, claim, or other authorization, on record with or accepted by the department of ecology, authorizing the beneficial use of water in accordance with all applicable state laws.

(89) "Well site inspection" means a departmental physical inspection of a well and the area near an existing or proposed well location, and completion of a department approved form that identifies the suitability of the well and site for a water supply.

8.55.050 Reserved

8.55.060 Bottled water and ice-making facilities

Water sources used by a facility regulated under Chapter 16-165 WAC that produces bottled water or ice for public consumption shall meet the requirements under Chapter 246-290 WAC.

8.55.070 Enforcement

(1) Violations of this rule are detrimental to the public health, safety and welfare and the department may initiate enforcement actions as authorized under this rule, RCW 70.46.060 and 70.119A.050.

(2) When enforcing the MCLs under this chapter, the department shall enforce compliance with the primary MCLs as a priority.

(3) When a system is out of compliance with these rules, the department may initiate appropriate enforcement actions, regardless of any prior approvals issued by the department, including, but not limited to:

- (a) Issuance of a compliance schedule;
- (b) Issuance of departmental orders requiring submission of water system plans, design reports, and construction report forms;
- (c) Issuance of departmental orders requiring specific actions or ceasing unacceptable activities within a designated time period;
- (d) Issuance of departmental orders to stop work and/or refrain from using any public water system or improvements thereto until all written approvals required by statute or rule are obtained;
- (e) Imposition of civil penalties as authorized under Chapter 70.119A RCW;
- (f) Imposition of civil penalties as authorized under LCC 1.20; and
- (g) Legal action by the local prosecutor or attorney general.

(4) When determined necessary for the protection of the public health the department may enter upon public and private premises at reasonable times for the purpose of conducting a Comprehensive System Evaluation (CSE), or Sanitary Survey, and enforcing this rule.

8.55.080 Waivers

(1) The health officer or local board of health may grant a waiver from a requirement of this rule, provided that:

- (a) The department has:
 - (i) Determined the waiver will not adversely affect the functionality of the water supply;
 - (ii) Determined the waiver will not adversely affect public health protection.
 - (iii) Determined the water system is unable to comply with the requirements and granting of the waiver will not result in an unreasonable risk to the health of consumers;
- (b) The health officer or local board of health obtains sufficient evidence from a purveyor that a proposed Group B water system will deliver drinking water that does not exceed a primary MCL under LCC 8.55.140 and will provide an adequate supply of water under LCC 8.55.110 Table 2; and
- (c) The health officer or local board of health may condition the approval of a waiver to include, at a minimum:
 - (i) Water quality treatment;
 - (ii) Monitoring;
 - (iii) Maintenance and oversight.

(2) The health officer or local board of health shall not grant a waiver from the residential population requirement for each

dwelling unit under Chapter 246-291-200(2) WAC and adopted in LCC 8.55.150(2).

(3) A waiver granted under this section shall lapse two years from the date of issuance unless the water system project has been completed or a written extension is granted.

8.55.090 Public Water System Coordination Act and satellite management

(1) A purveyor of a new or expanding Group B water system shall comply with the applicable coordinated water system plan created under Chapter 246-293 WAC and Chapter 70.116 RCW if located within the boundaries of a critical water supply service area.

(2) The department shall approve a new or expanding Group B water system consistent with requirements under Chapter 246-293-190 WAC and Chapter 70.116.060 (3) RCW.

(3) A new Group B water system must comply with SMA requirements under Chapter 70.119A.060 RCW.

8.55.100 Design report approval

(1) A purveyor shall receive written department approval of a design report prior to:

- (a) Installing a new Group B water system; or
- (b) Providing service to more than the current approved number and type of service connections.

(2) To obtain design report approval for a Group B water system, a purveyor shall provide a copy of the following, at a minimum:

- (a) Documentation that creating a new system or expanding an existing system does not conflict with any applicable coordinated water system plan adopted under Chapter 246-293 WAC;
- (b) Documentation that creating a new system complies with the SMA requirements under Chapter 70.119A.060(2)RCW ;
- (c) Source approval under LCC 8. 55.110 or LCC 8.55.220;
- (d) Documentation that all requirements under LCC 8.55.130 are met;
- (e) A system design that complies with the requirements under LCC 8.55.150 including, but not limited to:
 - (i) Drawings of each project component, including:
 - (A) Location;
 - (B) Orientation;
 - (C) Size; and
 - (D) Easements for:
 - (I) Future access and maintenance of distribution system pipelines located on private property, or franchise agreements necessary for distribution system pipelines located within public right of way; and
 - (II) Other system components; including access and maintenance of reservoirs, wells, and pumping stations.
 - (ii) Material specifications for each project component;
 - (iii) Construction specifications and assembly techniques;
 - (iv) Testing criteria and procedures; and
 - (v) A description of disinfection procedures as required under LLC 8.55.180; and
- (f) A signed Water System Owner's Statement of Accuracy and Responsibility.

(3) The design report shall be prepared, sealed, and signed in accordance with Chapter 196-23 WAC by a professional engineer who:

- (a) Is licensed in the state of Washington under Chapter 18.43 RCW; and
- (b) Has specific expertise regarding design, operation, and maintenance of public water systems.

(4) A purveyor must submit a "Construction Completion Report for Public Water System Projects" to the department on a form approved by the department within sixty days of construction completion, and before use of any approved Group B water system. The form must:

- (a) Be signed by a professional engineer
- (b) Include a statement that the project is constructed and completed according to the design report requirements under this rule; and
- (c) Include a statement that the installation, testing, and disinfection of the Group B water system was completed in accordance with this rule.

(5) All design changes, except for minor field revisions, must be submitted in writing to, and approved by, the department.

8.55.110 Groundwater source approval

(1) Groundwater sources submitted to the department or health officer for design approval under LCC 8.55.100 must comply with the following requirements:

- (a) Drinking water shall be obtained from the highest quality source feasible.
- (b) All permanent groundwater sources must:
 - (i) Be designed to be physically connected to the distribution system;
 - (ii) Be a drilled well constructed in accordance with Chapter 173-160 WAC; and
 - (iii) Meet water quality requirements under LCC 8.55.140.
- (c) The department shall not approve a design for a new or expanding Group B water system that uses a source that has hydraulic connectivity with surface water, has been found to be GWI, or is a surface water source.

- (d) The department shall not approve a design for a new or expanding Group B water system using a potential GWI source until a hydrogeologic evaluation is completed by a licensed hydrogeologist or licensed engineer that determines the source is not GWI and does not have hydraulic connectivity with surface water. The GWI evaluation and determination must be completed before the department will review the Group B design report.
- (2) A purveyor shall provide a copy of the following to the department or health officer to obtain groundwater source approval:
- (a) The water right permit, if required, for the source, quantity, type, and place of use;
 - (b) The water well report, as required under WAC 173-160-141;
 - (c) The satisfactory well site inspection and report form completed by the department;
 - (d) A map showing:
 - (i) The project location;
 - (ii) A six hundred foot radius around the well site designating the preliminary short-term groundwater contribution area; and
 - (iii) The perimeter of a one hundred foot SCA, meeting the requirements in subsection (4) of this section.
 - (e) A map showing topography, distances to the well from existing property lines, buildings, potential sources of contamination within the six hundred foot radius around the well, and any other natural or man-made features that could affect the quality or quantity of water;
 - (f) The recorded legal documents for the SCA;
 - (g) Satisfactory results from an initial analysis of raw source water quality from a certified lab, including, at a minimum:
 - (i) Coliform bacteria;
 - (ii) Inorganic chemical and physical parameters under LCC 8.55.140, Tables 3, 4, and 5; and
 - (iii) Other contaminants as directed by the department in areas where it determines that other contamination may be present.
 - (h) Pump test data establishing groundwater source capacity including, but not limited to:
 - (i) Static water level;
 - (ii) Sustainable yield;
 - (iii) Drawdown;
 - (iv) Recovery rate; and
 - (v) Duration of pumping.
 - (i) Additional pump testing in locations where water resource limitations or known seasonal groundwater fluctuations may affect future reliability as directed by the department or health officer.
- (3) Groundwater source capacity.
- (a) A groundwater source for a Group B water system with residential connections must be pump tested to determine if the well(s) and aquifer are capable of reliably supplying water that meets the minimum requirements under Table 2 of this section.
 - (b) A groundwater source must be pump tested to determine if the well(s) and aquifer are capable of supplying water at the rate required to provide the water volume as determined under LCC 8.55.150 for a source supplying a Group B water system with:
 - (i) Nonresidential service connections; or
 - (ii) Both residential and nonresidential service connections.
 - (c) Where a locally adopted watershed plan or ecology watershed rule under Title 173 WAC establishes a higher water supply requirement, the purveyor shall use the higher value to assess the adequacy of the source of supply.
 - (d) A purveyor shall design the Group B water system to meet the requirements under Table 2, even if a locally adopted watershed plan or watershed rule under Title 173 WAC limits water use below the values in Table 2.
 - (e) When assessing the need for a water right, the purveyor should assume that the domestic in-home portion of the total system maximum daily demand (MDD) will be at least 350gpd (gallons per day) per dwelling unit. The domestic in-home demand is the portion of the total system MDD that will be considered for purposes of compliance with Chapter 90.44.050 RCW *

*Group B Water System Design Guidelines, DOH 331-467, December 2012, Chapter 3 Estimating Water Demands Section 3.0.1

Table 2
Source and Water Supply Capability per Residential Service Connections

County	MDD as Gallons per day per dwelling unit
Lewis	750

- (4) SCA.
- (a) A purveyor shall establish the Sanitary Control Area (SCA) around each groundwater source to protect it from contamination.
 - (b) The SCA must have a minimum radius of one hundred feet, unless technical justification submitted by a licensed hydrogeologist or licensed engineer to the department supports a smaller area and is approved by the

health officer. The justification must address geological and hydrogeological data, well construction details, and other relevant factors necessary to provide adequate sanitary control.

(c) The department may require a larger SCA if geological and hydrological data support such a decision.

(d) A purveyor shall own the SCA, or the purveyor shall have the right to exercise complete sanitary control of the land through other legal provisions.

(e) A purveyor shall record a Declaration of Covenant, and Restrictive Covenants as necessary, to the title of each property that is sited partially or completely within the SCA to protect the SCA in perpetuity.

8.55.120 Interties

(1) No interties shall be used and/or constructed as a source of public water supply without department approval.

(2) A purveyor submitting a new or expanding Group B water system design for approval using a nonemergency intertie source shall provide the following to the department:

(a) A copy of the intertie agreement under subsection (3) of this section;

(b) Evidence that the supplying water system currently operates in compliance with Chapter 246-290 WAC or LCC 8.55;

(c) Location of the proposed intertie;

(d) Information on any water quality issues and treatment being used;

(e) Demonstration of the source capacity and hydraulic capacity of the supply and receiving systems at the designed flow rate through the intertie;

(f) A copy of the water right or water right change issued by ecology, if required under Chapter 90.03.383 RCW;

(g) Identification of alternative sources that will be used when the intertie agreement expires if the water is not being provided in perpetuity; and

(h) Verification that a source meter has been installed to measure water received.

(3) An intertie agreement between purveyors must identify:

(a) Specific time periods in which water will be provided;

(b) The volume of water available for use, including any seasonal or other restrictions; and

(c) How operations will be coordinated.

(4) Emergency use interties are interconnections between public water systems permitting the temporary exchange or delivery of water between systems only in cases of emergency that result in a permanent supply being unavailable for use.

(a) Emergency interties shall not be constructed or used without department approval.

(b) Prior to an Emergency intertie the purveyors shall ensure that the intertie has received department approval; and

(c) The design report for an Emergency Intertie shall be prepared, sealed, and signed in accordance with Chapter 196-23 WAC by a professional engineer who:

(i) Is licensed in the state of Washington under Chapter 18.43 RCW; and

(ii) Has specific expertise regarding design, operation, and maintenance of public water systems, and

(d) The report shall include:

(i) Description of the intended use of the emergency intertie;

(ii) Location of the proposed intertie;

(iii) Date the intertie is intended to be operational;

(iv) A copy of the intertie agreement between purveyors detailing the conditions and limitations of the intertie; and

(v) Hydraulic analysis to identify the impacts upon each water system.

8.55.130 Water system planning, reliability, and disclosure requirements

(1) A purveyor submitting a new or expanding Group B water system design for approval shall provide the following information to the department:

(a) The system's management and ownership;

(b) The system's service area and existing and proposed major facilities;

(c) The maximum number and type of service connections the system can safely and reliably supply;

(d) The relationship and compatibility with other locally adopted plans;

(e) The amount of revenue needed to operate and maintain the system, and a plan to meet revenue needs;

(f) A cross-connection control plan if any existing or potential cross-connections are identified;

(g) Security measures under the strict control of the purveyor to be provided to protect the water source, water storage reservoir, and the distribution system;

(h) For systems that will use sources with a well pump test indicating a yield of 5.0 gpm or less, a contingency plan describing short-term and long-term measures to restore water to consumers in the event the well(s) cannot provide an adequate supply of water;

(i) The public and departmental notification procedures that the purveyor will use as required under LCC 8.55.280.

(2) In the absence of system ownership by a DOH approved SMA or a UTC regulated water company that provides other suitable means that are acceptable to the department a purveyor shall record the following information on each customer's property title, by recording a "Notice to Future Property Owners", before providing water from the Group B water system to any service connection:

(a) System name and a DOH issued public water system identification number;

(b) System owner name and contact information;

- (c) The following statement: "This property is served by a Group B public water system that has water system approval under LCC 8.55 ";
- (d) Parcel numbers to be served by the system;
- (e) Indicate if the system is designed and constructed to provide fire suppression;
- (f) A copy of any waiver granted under LCC 8.55.080 to the purveyor;
- (g) Indicate:
 - (i) If service connections are metered or not;
 - (ii) If the purveyor intends to monitor the system for contaminants;
 - (iii) How often monitoring will occur;
 - (iv) How the consumers of the system will be notified of monitoring results;
- (h) Contact information for the approving authority (department or DOH);
- (i) The type of source treatment provided for any contaminants that exceed primary or secondary MCLs and any required monitoring and reporting;
- (g) Instructions about how to obtain a copy of the agreements for consumers, if one exists; and
- (k) Other information, as directed by the department.

8.55.140 Water quality requirements for groundwater source approval

- (1) All water quality samples collected under this section must be:
 - (a) Collected without chlorine, ultraviolet light, ozone, or other disinfectant in use to treat the source;
 - (b) Collected after the well has been pumped long enough to allow for collection of a representative sample of the aquifer, as described in the WSDOH *Group B Water System Design Guidelines (Current)*; and
 - (c) Analyzed by a certified lab.
- (2) To meet the requirements for design approval under LCC 8.55.100, a purveyor shall obtain, at a minimum:
 - (a) Satisfactory results from two raw source water samples analyzed for coliform bacteria after purging at minimum four well casing volumes between samples;
 - (i) The department will consider approval of a source that exceeds an MCL for coliform bacteria subject to LCC 8.55.140(5).
 - (b) Results from one raw source water sample that has been analyzed for complete Inorganic Chemicals , and does not exceed, any primary MCL in Table 3 of this section; and
 - (i) The department will consider approval of a source that exceeds an MCL for Inorganic Chemicals subject to LCC 8.55.140(5).
 - (c) In areas known or suspected to have contaminants of public health concern, one raw source water sample analyzed for the contaminant(s) as directed by the department.
- (3) When analytical results indicate a presence of coliform bacteria, a purveyor shall do the following:
 - (a) Disinfect the source using procedures under LCC 8.55.180; and
 - (b) Collect two repeat samples after purging at minimum four casing volumes or at end of pump test and analyze for coliform bacteria by a certified lab.
- (4) A purveyor shall collect a confirmation raw source water sample and have the sample analyzed for each parameter that exceeded the MCL in the initial sample, if:
 - (a) An analysis exceeds a primary MCL in Table 3 of this section;
 - (b) An analysis exceeds 50% of the MCL for Arsenic and/or Nitrate; or
 - (c) A contaminant of public health concern under subsection (2)(c) of this section exceeds the primary MCL under Chapter 246-290-310 WAC.
- (5) The department will consider approval of a proposed source that exceeds a primary MCL if:
 - (a) The source is not surface water, groundwater under the influence of surface water, or groundwater in hydraulic continuity with surface water;
 - (b) The system demonstrates financial and procedural viability to support ongoing treatment and operations; and
 - (c) The treatment is engineered and designed consistent with LCC 8.55.150;
 - (d) The treatment is designed to reliably, effectively, and demonstrably reduce the contaminant levels below the MCLs established in Tables 3, 4, and 5;
 - (e) The treatment system is monitored and operated to assure consistent, reliable and effective treatment; and
 - (f) The system maintains compliance consistent with LCC 8.55 including but not limited to LCC 8.55.150, LCC 8.55.210, LCC 8.55.250, and LCC 8.55.260.
- (6) The department will conduct enforcement under LCC 8.55.070 against purveyors who fail to operate and maintain a treatment system or fail to provide potable water to consumers from a source that has demonstrated exceedence(s) for a primary MCL during well development or identified at a later date.
- (7) When an analysis exceeds a secondary MCL in Table 4 or 5 of this section, a purveyor shall include treatment in the Group B water system design under LCC 8.55.150 so that drinking water delivered to consumers does not exceed a secondary MCL.
 - (i) The department will consider a waiver of treatment for a source that exceeds a secondary MCL providing the water supply does not serve residential connections and is not treated for a primary MCL.

Table 3
Primary Inorganic Chemical Contaminants

Substance	MCLs (mg/L)	
Antimony(Sb)	0.006	
Arsenic (As)	0.010*	
Barium (Ba)	2.0	
Beryllium (Be)	0.004	
Cadmium (Cd)	0.005	
Chromium (Cr)	0.1	
Cyanide (HCN)	0.2	
Fluoride (F)	4.0	
Mercury (Hg)	0.002	
Nickel (Ni)	0.1	
Nitrate (as N)	10.0	
Nitrite (as N)	1.0	
Selenium (Se)	0.05	
Thallium (Tl)	0.002	

Note: *The arsenic MCL in Table 3 applies to new and expanding Group B water systems. For Group B water systems constructed prior to January 1, 2014, the arsenic MCL is 0.05 mg/L. LCC 8.55.280 (4) and (6) and LCC 8.55.220(4) establish public notification requirements for Group B water systems constructed prior to January 1, 2014, with an arsenic concentration exceeding 0.010 mg/L.

Table 4
Secondary Inorganic Chemical Contaminants

Substance	MCLs (mg/L)	
Chloride (Cl)	250.0	
Fluoride (F)	2.0	
Iron (Fe)	0.3	
Manganese (Mn)	0.05	
Silver (Ag)	0.1	
Sulfate (SO ₄)	250.0	
Zinc	5.0	

Table 5
Secondary Physical Characteristics

Substance	MCLs	
Color	15 color units	
Specific conductivity	700 umhos/cm	
Total dissolved solids (TDS)	500 mg/L	

8.55.150 Design standards

(1) A purveyor submitting a new or expanding Group B water system design for approval shall use good engineering practices and apply industry standards in the design, such as those in:

- (a) The WSDOH guideline titled *Group B Water System Design Guidelines* (current version);
- (b) *Water Systems Council PAS-97(04) Pitless Adapters and Watertight Well Caps* (current version);
- (c) Standard specifications of the:
 - (i) American Public Works Association;
 - (ii) American Society of Civil Engineers;
 - (iii) American Water Works Association; and
 - (iv) American Society for Testing and Materials.
- (d) Minimum standards for construction and maintenance of wells, Chapter 173-160 WAC;
- (e) *Recommended Standards for Water Works, A Committee Report of the Great Lakes- Upper Mississippi River Board of State Public Health and Environmental Managers* (2007);
- (f) *Standard Specifications for Road, Bridge, and Municipal Construction* (WSDOT/APWA (current version));
- (g) *USC Manual of Cross-Connection Control*, (current version);
- (h) *PNWS-AWWA Cross-Connection Control Manual*, (current version);
- (i) International Building Code (IBC) (As adopted in current LCC); and Uniform Plumbing Code (UPC) (as adopted in current LCC);

(2) A purveyor submitting a new or expanding Group B water system design for approval shall:

- (a) Calculate residential population by using 2.5 persons per dwelling unit;
- (b) Use full-time occupancy for each dwelling unit; and
- (c) Use planning, engineering and design criteria under WAC 246-290-100 through 246-290-250 if the system is being designed to serve ten to fourteen residential service connections.

- (3) A purveyor shall demonstrate that the source(s) of supply, pipes and other constructed conveyances are capable of meeting the minimum residential water supply as required under LCC 8.55.110 Table 2.
- (4) A new or expanding Group B water system must be designed with the capacity to deliver the PHD at 30 psi (210 kPa) measured along property lines adjacent to distribution mains, under the following conditions:
 - (a) When all equalizing storage has been depleted, if the system is designed to supply PHD in part with equalizing storage; and
 - (b) At the "pump-on" pressure setting for the pump directly supplying the distribution system, when the water system is designed to supply PHD without any equalizing storage.
- (5) If the design PHD exceeds the total source pumping capacity, then sufficient equalizing storage must be provided.
- (6) The minimum design flow and duration required for fire flow and fire suppression storage, if provided, shall be determined by:
 - (a) The local fire protection authority; or
 - (b) As required under Chapter 246-293 WAC for Group B water systems within the boundaries of a designated critical water supply service area.
- (7) In the design of a new or expanding Group B water system that does not have to comply with minimum fire flow standards, a purveyor shall coordinate with the local fire protection authority to assess if any hydrants create adverse pressure problems as a result of expected fire suppression activities, and address any pressure problems in the design.
- (8) If fire flow is provided, the distribution system must be designed to provide the MDD for the entire Group B water system and the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system when the designed volume of fire suppression and equalizing storage has been depleted.
- (9) The Group B system design must contain a water meter that measures the water use of the entire water system (totalizing source meter) and a source sample tap.
- (10) The use of individual service booster pumps to meet the requirements of this section is prohibited unless owned, operated, and maintained by the purveyor.
- (11) A purveyor shall equip a new or expanding Group B water system with a generator transfer switch.
 - (a) The department will consider a waiver for the installation of a generator transfer switch as appropriate for system service connections.
 - (i) A waiver will not be issued to systems which serve residential connections or essential services.
- (12) A purveyor shall use generally accepted industry standards and practices in the elimination or control of all cross-connections, such as:
 - (a) USC *Manual of Cross-Connection Control*, (current version); and
 - (b) PNWS-AWWA *Cross-Connection Control Manual*, (current version);
- (13) A pitless unit, pitless adaptor, and vented sanitary well cap must conform with the product, material, installation, and testing standards under the *Water Systems Council PAS-97(04) Pitless Adapters and Watertight Well Caps*, (current version).

8.55.160 Drinking water materials and additives

- (1) In the design of a new or expanding Group B water system, all materials in substantial contact with potable water shall conform to the ANSI/NSF Standard 61.
- (2) Pipes, pipe fittings, fittings, fixtures, solder, or flux used in the design of a new or expanding Group B system shall be lead-free. For the purposes of this section, lead-free means:
 - (a) Not more than a weighted average of twenty-five hundredths of one percent (0.25%) lead for wetted surfaces of pipes and pipe fittings; and
 - (b) No more than two-tenths of one percent (0.2%) lead in solder and flux.
- (3) Any chemicals specified for use in the design of treatment for primary MCLs in Table 3 under LCC 8.55.140 with the exception of unscented commercial grade hypochlorite compounds, shall comply with ANSI/NSF Standard 60. The design dosage shall not exceed the maximum application dosage recommended for the product as certified by the ANSI/NSF Standard 60.
- (4) Any chemicals specified for use in the design of treatment for secondary MCLs in Table 4, and 5 under LCC 8.55.140, with the exception of unscented commercially available sodium hypochlorite solutions, shall comply with ANSI/NSF Standard 60. The design dosage shall not exceed the maximum application dosage recommended for the product as certified by the ANSI/NSF Standard 60.
- (5) The department may review and approve the use of materials or additives that are not ANSI/NSF Standard 60 or 61 certified on a case-by-case basis in coordination with an assessment of a licensed engineer.

8.55.170 Distribution systems

- (1) Storage reservoirs shall be designed to:
 - (a) Prevent entry by birds, animals, insects, excessive dust, and other potential sources of external contamination;
 - (b) Include:
 - (i) A weathertight roof;
 - (ii) A lockable weathertight access hatch;
 - (iii) A screened roof vent;
 - (iv) An overflow pipe with atmospheric discharge or other suitable means to prevent a cross-connection and protection from blockage or contaminant entry;
 - (v) A sample tap;

- (vi) A drain to daylight, or an alternative design approved by the department or health officer that is adequate to protect against cross-connection;
 - (vii) Tank isolation in order to perform maintenance procedures;
 - (viii) A reservoir maintenance plan including at minimum routine tank flushing and cleaning; and
 - (viii) Other appurtenances appropriate for the protection of stored water from contamination;
- (c) Be above normal ground surface level. If the bottom elevation of a storage reservoir must be below normal ground surface:
 - (i) The storage reservoir must be placed above the groundwater table; and
 - (ii) The top of a partially buried storage reservoir must be at least two feet above normal ground surface.
- (2) A Group B water system designed to supply fire hydrants must have a minimum distribution main size of six inches (150 mm) supplying each hydrant.
- (3) A Group B distribution system shall include individual service meters and the distribution system must meet criteria consistent with LCC 8.55.150.
 - (a) The department will consider a waiver for the installation of individual service meters as appropriate for system service connections.
 - (i) A waiver will not be issued to systems which serve residential connections.

8.55.180 Group B water system disinfection

- (1) A purveyor shall disinfect a Group B system and satisfactory bacteriological sample must be obtained before providing service to any consumer.
- (2) The water system disinfection procedures must conform to the following standards or department approved procedures:
 - (a) AWWA C651-05 or APWA/WSDOT (current version), for water main disinfection;
 - (b) AWWA C652-02, for reservoir disinfection; and
 - (c) AWWA C654-03, for well disinfection

8.55.190 Treatment design and operations

- (1) Treatment of groundwater sources shall be as determined by the department.
 - (a) Treatment of sources that exhibit contaminants above a primary MCL(s), LCC 8.55.140, Table 3, will only be considered if the system demonstrates financial and procedural viability to support ongoing treatment, monitoring, and operations that assures conformance with water quality standards.
- (2) Finished water quality from existing and proposed sources of supply shall conform to the minimum water quality standards established in this rule.
- (3) The treatment must be engineered and designed consistent with LCC 8.55.150 and LCC 8.55.160.
- (4) Predesign studies shall be required for groundwater treatment. The goal of the predesign study shall be to establish the most acceptable method to produce finished water quality that reliably reduces the contaminant levels below the MCL(s) established in LCC 8.55.140, Tables 3, 4, and 5.
- (5) The treatment shall be designed to consistently, effectively, and demonstrably reduce the contaminant levels below the MCLs established in LCC 8.55.140, Tables 3, 4, and 5.
- (6) Disinfection methods, other than chlorination, i.e., effective treatment technology recognized by authorities found in LCC 8.55.150, may be approved by the department with appropriate engineering justification.
- (7) The purveyor shall ensure that the system is operated in accordance with good operations procedures, LCC 8.55.150, and include an Operation and Maintenance Plan.
- (8) The purveyor shall ensure that no bypass is established or maintained to divert water around any feature of a treatment process, except by written approval from the department.
- (9) The treatment system shall be monitored and operated to assure consistent, reliable, and effective treatment.
- (10) The system must maintain compliance consistent with LCC 8.55 including but not limited to LCC 8.55.210, LCC 8.55.250, LCC 8.55.260, and LCC 8.55.270.

8.55.200 Continuity of service

- (1) A purveyor of a Group B water system shall notify all the system's consumers and the department in writing before transferring ownership. The notification must include a time schedule for transferring responsibilities, identification of the new purveyor and point of contact, and under what type of authority the new ownership will operate.
- (2) At least one year prior to terminating system operation, a purveyor of a Group B water system shall notify all consumers in writing and provide a copy of the written notice to the department.
- (3) Nothing in these rules shall prohibit a purveyor from lawfully terminating service to a specific customer if the customer fails to pay normal fees for service in a timely manner or if the customer allows or installs an unauthorized service connection(s) to the system.

8.55.210 Recordkeeping and reporting

- (1) The purveyor shall ensure that the following records of operation and water quality analyses are kept on file:
 - (a) Records of bacteriological analyses shall be kept for five years. Records of chemical analyses shall be kept for as long as the system is in operation. Other records of operation and analyses required by the department shall be kept for three years. All records shall bear the signature of the purveyor of the water system or his or her representative.

- (b) Records of action taken by the system to correct violations of primary drinking water regulations and copies of public notifications shall be kept for three years after the last action taken with respect to the particular violation involved.
 - (c) Copies of any written reports, summaries, or communications, relating to CSEs or sanitary surveys conducted by system personnel, by a consultant or by any local, state, or federal agency, shall be kept for ten years after completion of the CSE or survey involved.
 - (d) Where applicable, records of operation and analyses shall include the following:
 - (i) Daily chlorine residual;
 - (ii) Water treatment plant performance including, but not limited to:
 - (A) Type of chemicals used and quantity;
 - (B) Amount of water treated; and
 - (C) Results of analyses.
 - (iv) Monthly water use readings from totalizing source meters; and
 - (v) Other information as specified by the department.
- (2) Reporting.
- (a) The purveyor shall ensure that reports required by this chapter, are submitted to the department when requested by the department or as otherwise required by this section, including tests, measurements, and analytic reports.
 - (b) Water Facilities Inventory (WFI).
 - (i) The purveyor shall ensure the submittal of an updated WFI to the department every three years or as requested; and
 - (ii) The purveyor shall ensure the submittal of an updated WFI to the department within thirty days of any change in name, number of connections, ownership, or responsibility for management of the water system.
 - (c) Bacteriological.
 - (i) The purveyor shall ensure that the department is notified of the presence of:
 - (A) Total coliform in a routine sample, (E. coli absent) within ten days of notification by the laboratory; and
 - (1) If the system has required continuous chlorine disinfection treatment; by the end of the business day in which the purveyor is notified by the laboratory or as soon as possible.
 - (B) E. coli in a routine or repeat sample, as soon as possible but no later than by the end of the business day in which the purveyor is notified by the laboratory.
 - (ii) When a coliform MCL violation occurs, i.e. when the result(s) of repeat sample(s) confirm the presence of total coliform bacteria only (Non-acute), or confirm the presence of E. coli (Acute) the purveyor shall ensure that the following notifications are made:
 - (A) Non-acute Violation – Verbal notification of the department before the end of the next business day; and written notification to all water system users and to the department within 14 days, in accordance with LCC 8.55.280(3) and (4) (a) through (g).
 - (B) Acute Violation – Verbal and written notification of the department and all water system users as soon as possible, but no later than by the end of the business day in which the purveyor is notified by the laboratory, in accordance with LCC 8.55.280(2) and (4) (a) through (g).
 - (d) Water use data shall be reported upon request of the department.

8.55.220 Existing Group B water systems

- (1) A purveyor of a Group B water system shall apply for and obtain design approval under LCC 8.55.100, or approval under subsection (3) of this section before the system:
 - (a) Expands to serve a new service connection needing potable water; or
 - (b) Provides potable water for a new use of an existing service connection if a local permitting authority requires an approved public water supply as a condition of an approval of the new use.
- (2) The department may determine a Group B water system constructed before January 1, 2014, without design approval under this chapter, to be adequate for existing connections if, at a minimum, the following requirements are met:
 - (a) The system's source(s) must meet well construction standards, under Chapter 173-160 WAC;
 - (b) A satisfactory well site inspection completed by the department or their designee has documented that there are no sources of contamination in the SCA that could create a public health risk;
 - (i) or obtain approval by the health officer for an adjusted SCA, consistent with LCC 8.55.110(4)(b).
 - (c) Establish a Sanitary Control Area Covenant(s) to protect the 100' SCA consistent with LCC 8.55.110(4);
 - (d) Establish a Notice to Future Property Owners consistent with LCC 8.55.130(2);
 - (e) The system meets water quality standards under LCC 8.55.140, Table 3; and
 - (f) The system demonstrates it is capable of maintaining a minimum 20 psi at all points throughout the distribution system during peak demand.
- (3) A purveyor of a Group B water system approved prior to January 1, 2014, may provide potable water to additional service connections provided that
 - (a) The expanded use is consistent with the existing design approval;

- (b) The expanded use does not exceed the number of approved and type of service connections; and
- (c) The purveyor complies with all locally adopted requirements.
- (4) The arsenic MCL for Group B water systems constructed prior to January 1, 2014, is 0.05 mg/L (50 ppb).
 - (a) Systems that serve residential connections and were approved prior to January 1, 2014 providing water to consumers containing arsenic exceeding 0.010mg/l (10 ppb) but less than 0.05 mg/l (50 ppb) shall conduct arsenic sampling every thirty six months and provide consumer notification consistent with LCC 8.55.280(4) and (6).

8.55.230 General monitoring requirements.

- (1) A purveyor of a Group B system shall provide potable water to the system's consumers.
- (2) The department or health officer may require a purveyor to collect additional water quality samples, have the samples analyzed by a certified lab, and report results as required under LCC 8.55.280 when the department:
 - (a) Determines a public health risk exists;
 - (b) Receives information documenting contamination;
 - (c) Receives a report of suspected or known waterborne illness from a health care provider as required under Chapter 246-101 WAC; or
 - (d) Is aware of, or observes, a situation in which the source may be vulnerable to contamination. For example, a source is vulnerable to contamination from a flood event.

8.55.240 General follow-up

- (1) If a water quality sample exceeds any MCLs listed in this rule, the purveyor shall ensure notification of the department and take follow-up action as described in this chapter.
- (2) When a primary MCL violation occurs, the purveyor shall ensure that the following actions are taken:
 - (a) Notification of the department in accordance with LCC 8.55.210, 8.55.260, and 8.55.280;
 - (b) Notification of the consumers served by the system in accordance with LCC 8.55.280;
 - (c) Determination of the cause of the contamination; and
- (3) Other action as directed by the department.
- (4) When a secondary MCL exceedence occurs, the purveyor shall ensure that the department is notified and that action is taken as directed by the department.
- (5) The department shall determine the follow-up action when a substance not included in this chapter is detected.

8.55.250 Bacteriological

- (1) Purveyors shall ensure the collection and submittal of a sample for coliform analysis to a certified lab at least once every twelve months from the furthest end of the distribution system or as directed by the department.
- (2) When total coliform bacteria are present in any sample the purveyor shall ensure that:
 - (a) The sample is analyzed for E. coli;
 - (b) The department is notified of the unsatisfactory sample in accordance with LCC 8.55.210(2)(c);
 - (c) Two repeat samples are collected; and
 - (i) Within 5 days of notification or department approved time;
 - (A) If the system has continuous required disinfection treatment, the sample must be collected within 24 hours of notification; or
 - (B) A time approved by the department.
 - (ii) Prior to adding any chlorine to the source or system; and
 - (ii) From the following locations;
 - (A) Site where unsatisfactory sample was taken; and
 - (B) Source sample tap, or as close to the well as possible
 - (d) Further action as directed by the department.
- (3) MCLs.
 - (a) MCLs under this subsection shall be considered primary standards.
 - (b) A Non-Acute MCL violation occurs when a routine sample and at least one related repeat sample are total coliform present (E. coli absent).
 - (i) If a Non-Acute violation occurs, the purveyor shall ensure that the department and all water system users are notified in accordance with LCC 8.55.210(2)(c)(ii)(A) and 8.55.280(3) and (4).
 - (ii) Within 14 days of notification by the lab of the confirmed coliform presence the purveyor shall ensure corrective action has been taken to identify and eliminate the source of contamination. Follow up samples must be collected as follows:
 - (A) At minimum, collect and submit two repeat samples for coliform analysis from the same sites as the first set of repeat samples were collected. Both of these repeat samples must be absent of coliform bacteria for the system to return to routine annual compliance sampling.
 - (1) For a system that does not have continuous disinfection treatment, the samples must not be collected until disinfection procedures are complete and no free or total chlorine residual remains in the water supply.
 - (d) An Acute MCL violation occurs when a routine sample and at least one related repeat sample are both total coliform present, AND one of the samples is also E. coli present.
 - (i) If an Acute violation occurs, the purveyor shall ensure that the department and all water system users are notified in accordance with LCC 8.55.210(2)(c)(ii)(B) and LCC 8.55.280(2)(a) and (4); and

(ii) As soon as possible but no later than within 24 hours of notification by the lab of the confirmed *E. coli* presence, the purveyor shall ensure corrective action is being taken to identify and eliminate the source of contamination. Once corrective action has eliminated the coliform bacteria, follow up samples must be collected as follows:

(A) At minimum, collect and submit two repeat samples on each of two consecutive days for coliform analysis from the same collection sites as the first set of repeat samples.

(1) All samples in both sets of repeat samples must be absent of any coliform bacteria for the system to return to routine annual compliance sampling.

(2) For a system that does not have continuous required disinfection treatment, the samples shall not be collected until disinfection procedures are complete and no free or total chlorine residual remains in the water supply.

8.55.260 Inorganic chemical and physical characteristics

(1) Nitrate Monitoring.

(a) After the initial complete IOC analysis required for new source approval, purveyors shall ensure ongoing submittal to the department of results of at least one nitrate sample collected from each source every thirty-six months and analyzed by a DOH certified lab.

(i) Single source water systems shall take the sample at the source sample tap or the closest distribution point.

(ii) Systems with multiple sources shall take a sample from each source at each source sample tap or at the closest distribution point.

(A) If normal operation is such that multiple sources are blended prior to entry to distribution, a single blended nitrate sample is allowed at that entry point to distribution.

(iii) Systems with permanent water treatment shall take a sample at the post treatment sample tap or the nearest post treatment tap in the distribution system.

(b) Systems which detect nitrate above 5 mg/l but below the MCL of 10 mg/l shall conduct quarterly nitrate sampling for four consecutive quarters:

(i) The sampling will determine the seasonal high (quarter in which nitrate is highest) for future sampling, and confirm that nitrate remains reliably and consistently below the MCL of 10 mg/l; and

(ii) Sampling will begin in the quarter following the quarter in which nitrate exceeded 5 mg/l

(A) The quarter in which nitrate exceeded is considered the first of the four quarters; and

(B) Once four quarters of sampling is completed, system must begin annual sampling in the quarter in which nitrate was the highest, and continue annual sampling until directed otherwise by the department.

(c) When a routine nitrate analysis detects nitrate levels above the MCL of 10 mg/l, the purveyor shall ensure that:

(i) The department is verbally notified as soon as possible but no later than by the end of the business day in which the purveyor is notified by the laboratory; and

(ii) A confirmation sample is collected from the same location within 5 days of notification by the lab, or within a time approved by the department;

(d) An Acute Nitrate MCL Violation occurs when the routine sample and the confirmation sample results both exceed the MCL of 10 mg/l, or the average of the two nitrate results exceeds the MCL.

(i) If an Acute Nitrate MCL violation occurs, the purveyor shall ensure that the department and all water system users are notified in accordance with LCC.8.55.280(2)(b) and (4);

(A) As soon as possible but no later than within 24 hours of notification by the lab of a confirmed nitrate MCL exceedence, the purveyor shall ensure corrective action is being taken to identify and eliminate the source of contamination; and

(B) In coordination and consultation with the department, the purveyor shall write and issue a DO NOT DRINK THE WATER advisory, which shall remain in effect until nitrate is reduced to less than 10 mg/l.

8.55.270 Other substances.

(1) In areas known or suspected of being contaminated with other substances of public health concern, the department may require that a purveyor submit water samples to test for the suspected contamination at a frequency determined by the department.

(2) The department may require repeat samples for confirmation of results.

(3) Any substance confirmed in a water system that does not have an MCL listed in this rule shall be subject to the MCLs, state advisory levels (SALs) and other provisions found in Chapter 246-290 WAC.

8.55.280 Public and departmental notification

(1) A Group B water system purveyor shall notify the department as soon as possible but no later than 24 hours from laboratory notification when :

(a) A routine annual compliance sample indicates the presence of total coliform bacteria and the system has required continuous disinfection treatment;

(b) A water quality sample analysis from a certified lab indicates the presence of *E. coli*;

- (c) A water quality sample analysis from a certified lab indicates the presence of nitrate at a concentration at or above 10.0 mg/L; or
 - (d) Is aware of circumstances that pose a threat of acute contamination, such as a flood event.
- (2) A Group B water system purveyor shall issue notification to the department and all system consumers in writing within twenty four hours of an Acute MCL violation.
- (a) An Acute Coliform MCL violation occurs when a routine sample and at least one related repeat sample are both total coliform present and one of the samples is also E. coli present.
 - (i) In coordination with the department, the purveyor shall issue a Boil Water Advisory; and
 - (ii) Further action may be required by the department
 - (b) An Acute Nitrate MCL violation occurs when a routine nitrate sample and a confirmation sample both exceed the nitrate MCL, or the average of the two samples exceeds the nitrate MCL.
 - (i) In coordination with the department, the purveyor shall issue a "Do NOT Drink the Water" Health Advisory; and
 - (ii) Further action may be required by the department
- (3) A Group B water system purveyor shall issue notification to the department and all system consumers in writing within 14 days if a Non-acute Coliform MCL violation occurs; and
- (a) Take further action as directed by the department
- (4) The public (consumer) notification must include the following information:
- (a) A description of contamination and any known problem(s);
 - (b) What the purveyor is doing to resolve the problem(s);
 - (c) Where to get information about potential health effects;
 - (d) What the consumers should do to protect their health, including the use of another source of water;
 - (e) When the purveyor expects the problem(s) to be resolved;
 - (f) Group B water system contact information, including address, phone number, and if available, an e-mail address;
 - (f) When appropriate, notices shall be multilingual; and
 - (g) The purveyor may provide additional information to further explain the situation.
- (5) When circumstances dictate the purveyor may give a broader or more immediate notice to protect public health, the department may require notification by whatever means necessary.
- (6) If a Group B water system constructed prior to January 1, 2014, has an arsenic concentration exceeding 0.010 mg/L, the purveyor shall notify consumers in writing:
- (a) Initially by March 31, 2014;
 - (b) Within thirty days of receiving a sample analysis result from a certified lab; and
 - (c) Within thirty days of adding a new service connection under LCC 8.55.220.

8.55.290 Severability

If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.